

August 30, 2022

MIDDLETON ASSOCIATES INCORPORATED
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ADDENDUM NUMBER 2
TO THE DRAWINGS AND SPECIFICATIONS

PROJECT: Washington Street Gym HVAC Improvements

FOR: Macomb CUSD No. 185
323 W. Washington Street
Macomb, IL 61455

A/E PROJECT NO: 2547 0220

ISSUE DATE: August 1, 2022

BID OPENING: Thursday, September 1, 2022, 2:00 p.m., prevailing time
323 W. Washington Street, Macomb, IL 61455

THIS ADDENDUM DOES NOT CHANGE THE BID DATE OR BID TIME.

Upon receipt of this ADDENDUM, insert same into the documents, which were issued to you. Hereafter, said ADDENDUM shall be as much a part of the said documents as though originally set forth therein. THIS ADDENDUM DOES NOT CHANGE THE BID DATE.

5. TO THE DRAWINGS AND SPECIFICATIONS; Any conduit and gas pipe exposed to view mounted on the building wall shall be painted to match the building. Prime and DTM as appropriate for the pipe material.
6. TO THE DRAWINGS; M501 and E101: Revise electrical, RTU-1 and RTU-2.
 - a. Revise to 1 ¼" conduit.
 - b. RTU-1: #2 wire size
 - c. RTU-2: #3 wire size

See attached revised plans

Attachment: Drawings M501 and E101

END ADDENDUM NO. 2

ROOF TOP UNIT SCHEDULE																									
MARK	MANUFACTURER	MODEL	SERVES	SUPPLY FAN						DX COOLING						GAS HEATING				WEIGHT		ELECTRICAL			NOTES
				FLOW	ESP	TSP	MOTOR	MOTOR BHP	FAN	AMBIENT TEMP	CAPACITY (MBH)		ENTERING AIR TEMP		LEAVING AIR TEMP		CAPACITY IN / OUT	ENTERING AIR TEMP	LEAVING AIR TEMP	STAGES	LBS	VOLTAGE	MCA	MCOP	
				CFM	WG	WG	HP	HP	TYPE	"F	TOTAL	SENSIBLE	DB	WB	DB	WB	MBH	DB	DB						
RTU-1	CARRIER	48TCEE16	GYM-WEST	5000	1.4	3	5	3.3	FC	95	179.1	126.1	80	67	56.6	56.1	240 / 195	65	101.1	2	1167	208/60/3	80	100	1-9
RTU-2	CARRIER	48TCEE14	GYM-EAST	4200	1.4	3	5	3.4	FC	95	145.4	98.7	80.9	67.6	59.1	58.6	224 / 184	65	105.6	2	1380	208/60/3	73	80	1-9

1. PROVIDE SINGLE ZONE VAV UNIT
2. PROVIDE VFD SUPPLY FAN WITH SHAFT GROUNDING
3. PROVIDE CONDENSER COIL HAIL GUARD
4. PROVIDE (2) STAGE COOLING WITH HUMIDIFIER
5. PROVIDE TEMP HUMIDITY AND CO2 SENSOR. COORDINATE WITH TEMPERATURE CONTROL CONTRACTOR.
6. PROVIDE UNIT MOUNTED NEMA 3R NON-FUSED DISCONNECT SWITCH
7. PROVIDE POWERED CONVENIENCE OUTLET
8. PROVIDE ECONOMIZER
9. PROVIDE 20" TALL ROOF CURB TO BE ANCHORED TO GRADE.
10. PROVIDE WITH AIR PURIFICATION GPS - GLOBAL PLASMA SOLUTIONS MODEL: IMOD. UL 2998 OZONE FREE.

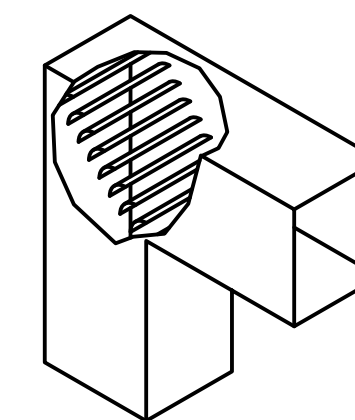
HEAT PUMP SCHEDULE																
MARK	MANUFACTURER	MODEL	COMB%	COOLING DESIGN TEMP (F°)	COOLING CAPACITY (BTUH)	HEATING DESIGN TEMP (F°)	HEATING CAPACITY (BTUH)	SOUND (dBA)	PIPING (FT)	REFRIGERANT (LBS)	PHASE					COMMENTS
											VOLTAGE	PHASE	MCA	RUN (AMPS)	MCOP (AMPS)	
HP-1	CARRIER	RAV-SP240AT2-UL	100	100	25,000	5	26,400	50	-	-	208	1Ø	30	-	40	1,2
HP-2	CARRIER	RAV-SP240AT2-UL	100	100	25,000	5	26,400	50	-	-	208	1Ø	30	-	40	1,2

1. POWER FAN COIL UNIT FROM OUTDOOR HEAT PUMP.
2. DISCONNECT SWITCH BY ELECTRICAL CONTRACTOR.

FAN COIL UNIT SCHEDULE											
MARK	MANUFACTURER	MODEL	AIRFLOW (CFM)	TOTAL COOLING CAPACITY (BTUH)	SENSIBLE COOLING CAPACITY (BTUH)	TOTAL HEATING CAPACITY (BTUH)	SOUND (dBA)	WEIGHT (LBS)	CONDENSATE PUMP	COMMENTS	
FCU-1	CARRIER	RAV-SP240KRT-UL	530	25,000	25,000	26,400	50	31	YES	1,2,3,4	
FCU-2	CARRIER	RAV-SP240KRT-UL	530	25,000	25,000	26,400	50	31	YES	1,2,3,4	

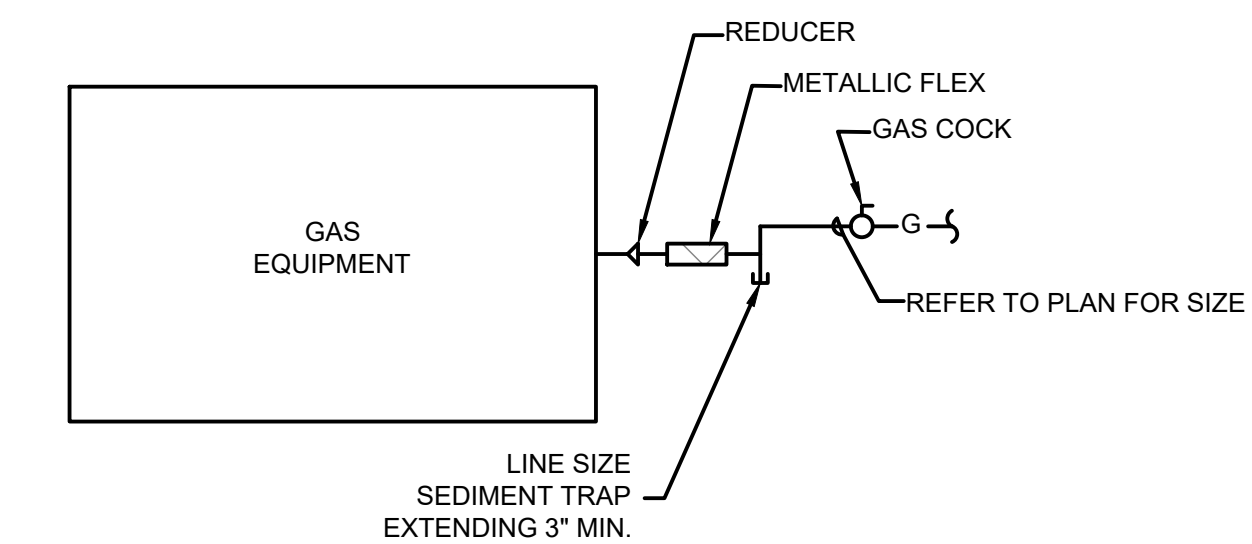
1. POWER FAN COIL UNIT FROM OUTDOOR VRF HEAT PUMP.
2. PROVIDE WITH AIR PURIFICATION GPS - GLOBAL PLASMA SOLUTIONS, MODEL: GPS-FC-2. UL 2998 OZONE FREE.
3. PROVIDE WIRED CONTROLLER RBC-AMT3ZUL.
4. SIZE REFRIGERANT PIPING PER MANUFACTURERS RECOMMENDATIONS.

MECHANICAL DIFFUSER/GRILLE SCHEDULE											
CALLOUT	TYPE	MANUFACTURER	MODEL NUMBER	MAX FLOW (CFM)	DUCT	FACE	FRAME SIZE	FRAME TYPE	MAX NC.	FINISH	COMMENTS
R1	HEAVY DUTY RETURN GRILLE - STEEL	TITUS	33RL	5000	48"x48"	50"x50"	-	SURFACE	20	WHITE	VERIFY SIZE IN FIELD

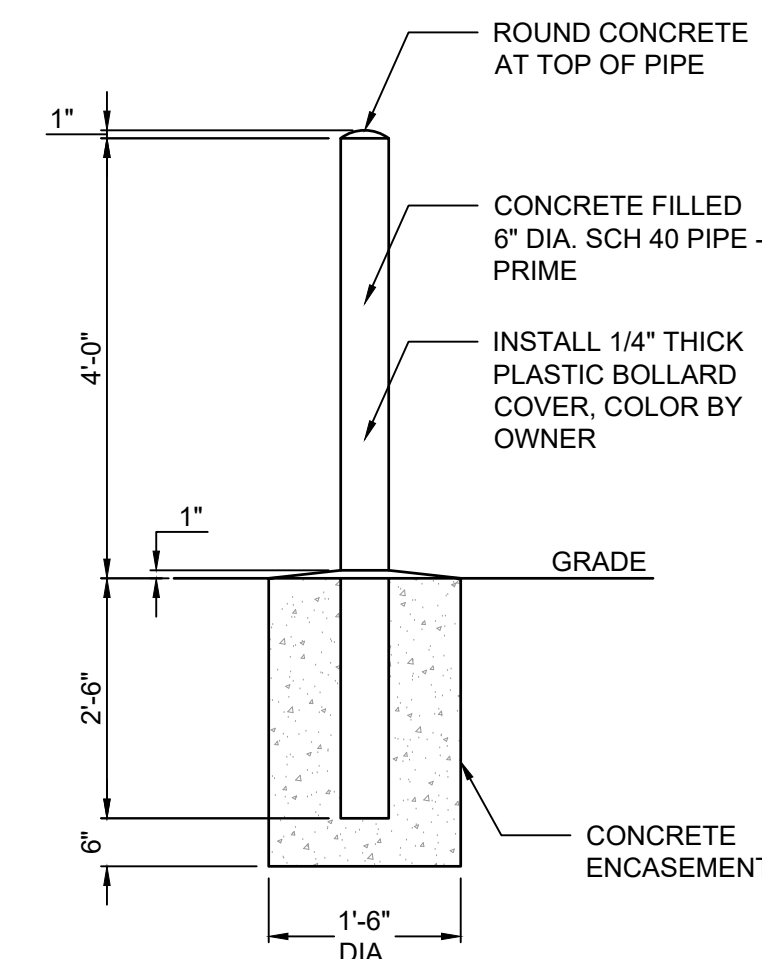


NOTE:
ALL DUCT 90° ELBOWS SHALL BE RADIUS ELBOWS UNLESS CLEARANCES REQUIRE A SQUARE RADIUS. ALL SQUARE RADIUS ELBOWS SHALL INCLUDE TURNING VANES.

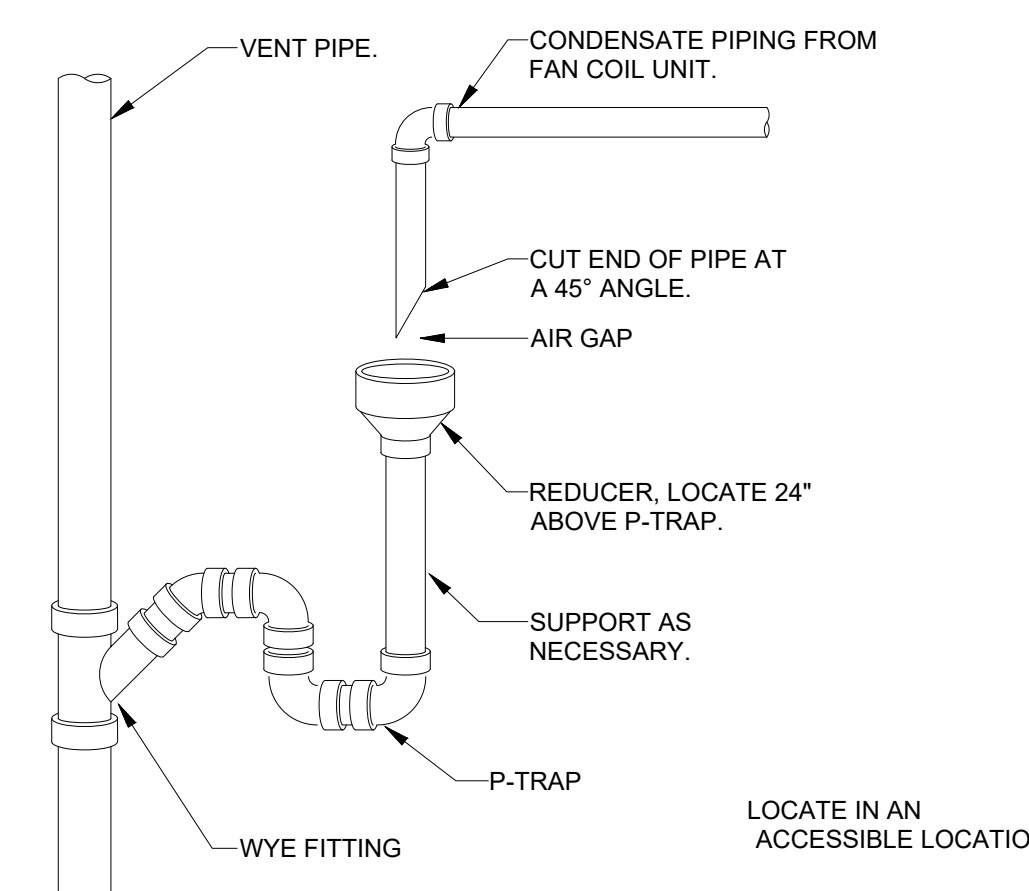
SQUARE THROAT ELBOW WITH VANES (TYP)
N.T.S.



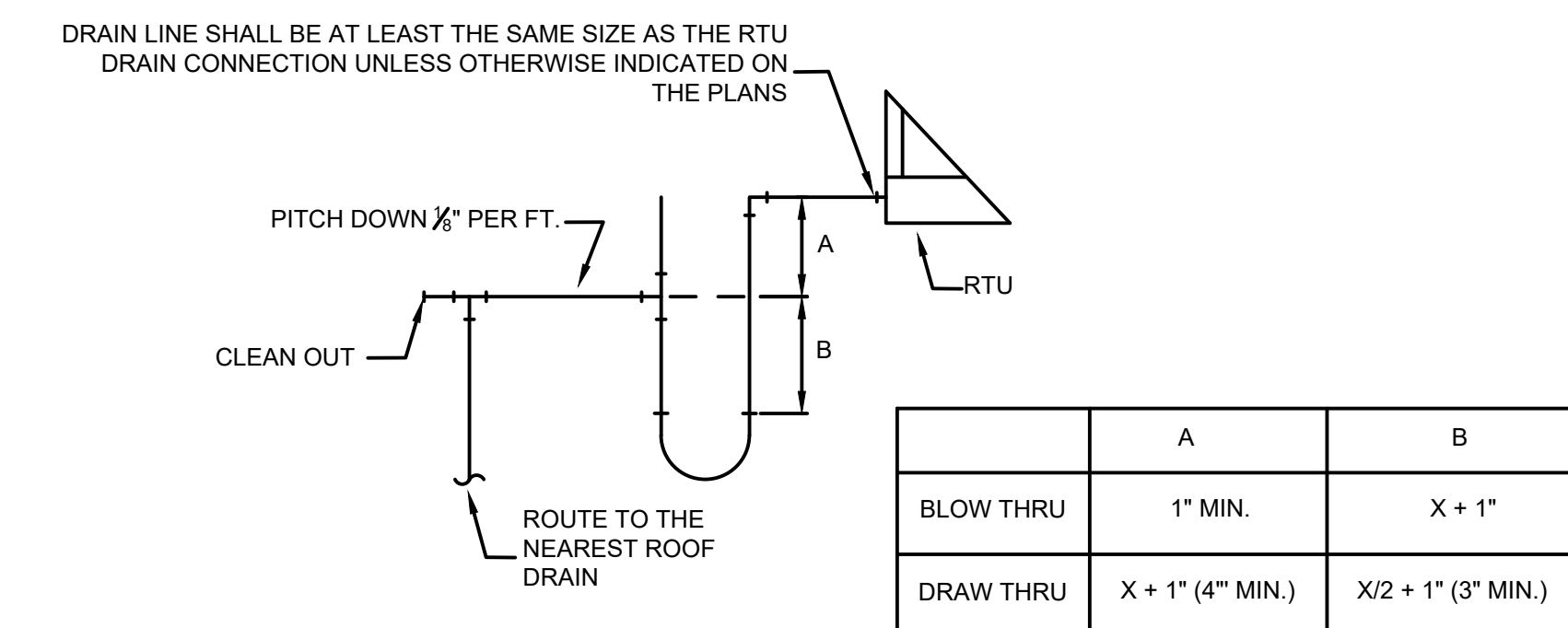
GAS CONNECTION
N.T.S.



CONCRETE BOLLARD
N.T.S.



CONDENSATION WET VENT
N.T.S.



ROOF TOP UNIT CONDENSATE DRAIN TRAP DETAIL
N.T.S.

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REVISION HISTORY			
NO.	DESCRIPTION	DATE	APPN.
1	ADDENDUM 2	08/29/2022	SFD

HVAC & ELECTRICAL IMPROVEMENTS
TO WASHINGTON ST. GYM

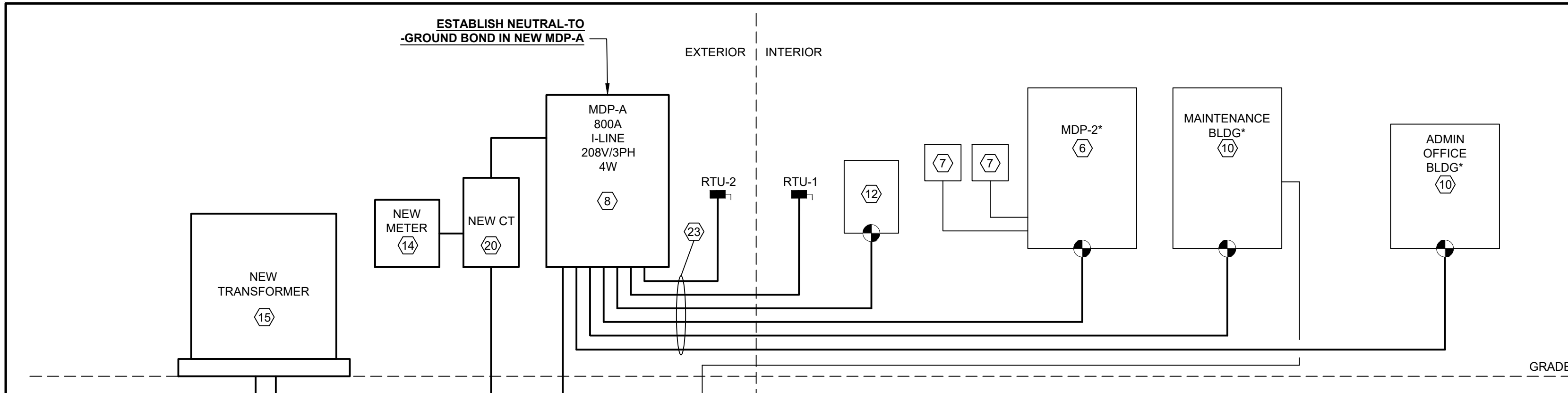
MACOMB CUSD 185
MACOMB, IL 61455

DESIGNED	SFD	DRAWN	APW
FIELD		FIELD BOOK	
CHECKED	SFD	CHECK DATE	07/29/2022

SHEET TITLE
MECHANICAL SCHEDULES AND DETAILS

PROJECT NO.
21-0155
DRAWING ISSUED DATE:
08/01/2022

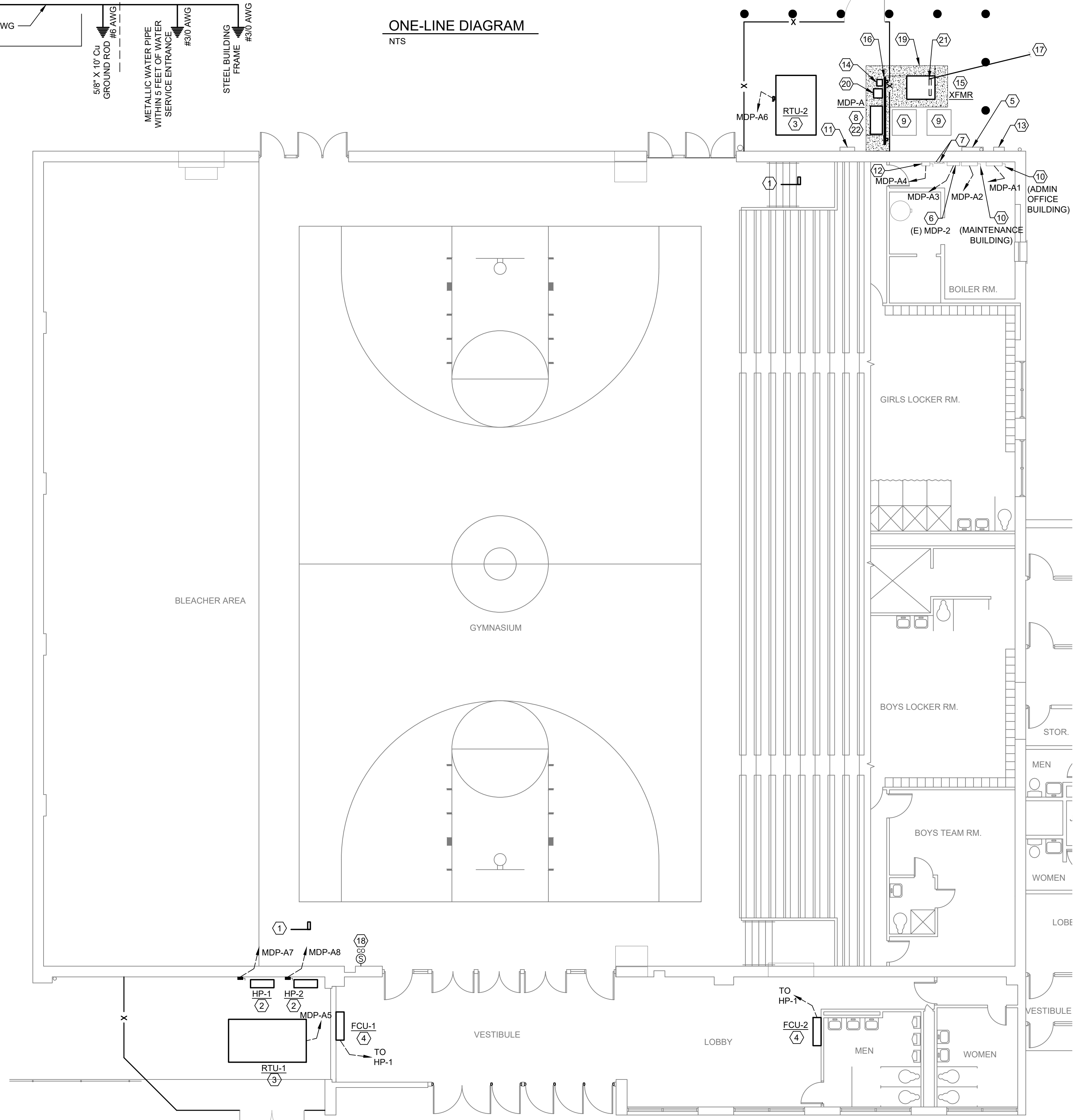
SHEET
M501



ONE-LINE DIAGRAM
NTS

PANELBOARD SCHEDULE		LOCATION: OUTDOORS		VOLTS: 120/208		PANEL TYPE: MAIN CB	
MAIN DISTRIBUTION PANEL "MDP-A"		MOUNTING: SURFACE		PHASES: 3		MAINS RATING: 800 A	
		ENCLOSURE: NEMA 3		WIRES: 4		MAIN BREAKER: 800 A	
ITEM NO.	PURPOSE	# OF POLES	FRAME SIZE	CIRCUIT BREAKER	WIRE	GND	CONDUIT
1	EXISTING ADMIN OFFICES	3	400	250	**	**	PER NEC
2	EXISTING MAINTENANCE BUILDING	3	400	400	**	**	PER NEC
3	EXISTING GYM AREA (MDP-2)	2	400	400	**	**	PER NEC
4	EXISTING ELECTRIC WATER HEATER	3	400	150"	1-1/4"	1-1/4"	PER NEC
5	RTU-1	3	125	100"	#2	8	1-1/4"
6	RTU-2	3	125	80"	#3	8	1-1/4"
7	HP-1	2	-	40"	8	10	0.75"
8	HP-2	2	-	40"	8	10	0.75"
9	SPARE	3	400	250			
10	ADDITIONAL SPACES (QUANTITY OF 4)	3	400				

* VERIFY BREAKER SIZE WITH ACTUAL EQUIPMENT SUBMITTED.
** VERIFY EXISTING FEEDER SIZE(S) AND SET(S). REPLACE FEEDERS FROM NEW MDP-A WITH NEW TO MATCH EXISTING FEEDER SIZE(S) AND SET(S).



ELECTRICAL PLAN
1/8" = 1'-0"

ELECTRICAL NOTES

1. APPLICABLE STANDARDS: NFPA-70, NFPA-101, STATE BUILDING CODES, AND THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) OF 1971 AND ALL AMENDMENTS THERETO; EQUIPMENT, DEVICES, APPARATUS, SYSTEMS, AND INSTALLATIONS SHALL BE ENTIRELY SUITABLE AND SAFE FOR EACH INTENDED APPLICATION AND BE IN FULL COMPLIANCE WITH APPLICABLE STANDARDS, REQUIREMENTS, RULES, REGULATIONS, CODES, STATUTES, ORDINANCES, ETC., OF MUNICIPAL, COUNTY, AND STATE GOVERNMENTS, OWNER'S INSURANCE COMPANY, LOCAL UTILITIES, AND LABOR REGULATIONS. NOTHING CONTAINED IN THESE PLANS AND SPECIFICATIONS SHALL BE CONSTRUED TO CONFLICT WITH THESE LAWS, CODES, AND ORDINANCES.
2. DRAWINGS ARE SCHEMATIC AND SHOW APPROXIMATE LOCATIONS OF ELECTRICAL EQUIPMENT. EXACT LOCATIONS SHALL BE COORDINATED BY THE CONTRACTOR AND VERIFIED IN THE FIELD PRIOR TO ROUGH-IN.
3. INSTALLATIONS WHICH INCLUDE ELECTRICAL FIXTURES, DEVICES, CONDUIT, SWITCHES, PANELS, HANGERS, WIRE, CABLE, STANDARDS, ETC., MUST BE ENTIRELY SUITABLE FOR TEMPERATURES, HUMIDITY, DAMP AREAS, VOLTAGE, FREQUENCY, AND ALL INSTALLATION CONDITIONS ENCOUNTERED.
4. INSTALLATION MUST BE ENTIRELY SAFE IN EVERY RESPECT, AND MUST NOT CREATE ANY CONDITIONS OF ANY KIND WHICH WILL BE HARMFUL TO ANY OCCUPANT OF THE BUILDING. IF CONTRACTOR BELIEVES THAT INSTALLATION WILL NOT BE SAFE FOR ALL PEOPLE, HE/SHE SHALL SO REPORT IN WRITING TO ENGINEER BEFORE ANY EQUIPMENT IS PURCHASED OR WORK IS INSTALLED, GIVING EXACT RECOMMENDATIONS, AND REASONS FOR THEM.
5. GROUNDING: ALL GROUNDING SHALL BE IN STRICT ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC).
6. INSTALLATION OF ELECTRICAL DEVICES SHALL BE COORDINATED WITH OTHER TRADES AS NECESSARY TO PREVENT ANY CONFLICTS DURING CONSTRUCTION.
7. LOW VOLTAGE CONDUIT AND JUNCTION BOXES SHALL BE INSTALLED BY THE ELECTRICAL CONTRACTOR.
8. EQUIPMENT GROUNDING CONDUCTORS SHALL BE PULLED WITH ALL BRANCH CIRCUITS. CONDUIT SHALL NOT BE USED AS A GROUND U.N.O.
9. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS, ACCESSORIES, TOOLS, EQUIPMENT, TRANSPORTATION, LABOR, SERVICES AND OPERATIONS NECESSARY FOR A COMPLETE ELECTRICAL SYSTEM.
10. ELECTRICAL CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND ARRANGE FOR ALL INSPECTIONS REQUIRED BY STATE OR LOCAL AUTHORITIES.
11. MATERIALS MUST BE NEW, IN FIRST CLASS CONDITION.
12. CONDUIT SHALL BE SEPARATELY HUNG AND ANCHORED, FREE TO EXPAND AND CONTRACT QUIETLY, WITHOUT IMPOSING STRAINS ON STRUCTURE, DEVICES, AND EQUIPMENT. CONDUIT SHALL BE RUN PARALLEL OR PERPENDICULAR TO BUILDING LINES.
13. CONTRACTOR SHALL PERFORM EXCAVATION REQUIRED TO INSTALL HIS WORK.

ELECTRICAL KEY NOTES (AS NOTED ON THIS SHEET)

1. INTEGRATE DUCT MOUNTED SMOKE DETECTOR TO FIRE ALARM SYSTEM. COORDINATE WITH MECHANICAL CONTRACTOR.
2. DISCONNECT SWITCH BY ELECTRICAL CONTRACTOR.
3. DISCONNECT SWITCH BY EQUIPMENT MANUFACTURER. COORDINATE WITH MECHANICAL CONTRACTOR.
4. PROVIDE TOGGLE DISCONNECT SWITCH FOR FAN COIL UNIT.
5. EXISTING GAS METER SHOWN FOR REFERENCE.
6. EXISTING ELECTRICAL PANEL TO REMAIN. REPLACE NEW FEEDERS TO PANEL FROM NEW MDP-A TO MATCH EXISTING. INSTALL IN RIGID CONDUIT PER NEC.
7. EXISTING FUSED DISCONNECT SWITCH TO REMAIN.
8. MAINTAIN SERVICE CLEARANCES FOR NEW PANEL.
9. AMEREN TO REMOVE TRANSFORMER AFTER NEW SERVICE IS OPERATIONAL. CAP EXISTING CONDUIT AFTER REMOVAL AND PATCH PAVEMENT.
10. EXISTING FUSED DISCONNECT SWITCH TO REMAIN. REPLACE NEW FEEDERS TO PANEL FROM NEW MDP-A TO MATCH EXISTING. INSTALL IN CONDUIT PER NEC.
11. EXISTING DEMARCATION PANEL(S) TO REMAIN.
12. EXISTING DISCONNECT SWITCH SERVING WATER HEATER TO REMAIN. REPLACE NEW FEEDERS TO PANEL FROM NEW MDP-A TO MATCH EXISTING. INSTALL IN CONDUIT PER NEC.
13. AMEREN TO REMOVE EXISTING CT CABINET AFTER NEW SERVICE IS OPERATIONAL. PATCH WALL.
14. NEW METER BY AMEREN.
15. NEW TRANSFORMER BY AMEREN. MAINTAIN SERVICE CLEARANCES PER AMEREN. COORDINATE PLACEMENT OF BOLLARDS WITH GENERAL CONTRACTOR.
16. PROVIDE BACKBOARD SUPPORT FOR NEW ELECTRICAL GEAR.
17. SEE SHEET E201 FOR CONTINUATION.
18. CARBON MONOXIDE SENSOR PER ILLINOIS PUBLIC ACT 099-0470. CO SENSOR TO BE ADDRESSABLE TYPE TO COMMUNICATE WITH BUILDING FIRE ALARM SYSTEM.
19. SAW CUT PAVEMENT TO PREPARE FOR NEW ELEVATED PAD. EXTEND CONCRETE PAD WITHIN AREA SHOWN HATCHED. PROVIDE 4" THICK CONCRETE SLAB WITH #4S @ 18" O.C., E-W, CENTERED IN SLAB, ON 6" COMPACTED AGGREGATE. PROVIDE 12" THICKENED EDGE. PAD TO COMPLY WITH AMEREN REQUIREMENTS.
20. NEW CT CABINET BY AMEREN.
21. PRIOR TO POURING CONCRETE PAD, PROVIDE RECTANGULAR BLOCK-OUT TO ALLOW SPACE FOR NEW AND FUTURE UNDERGROUND CONDUIT PENETRATIONS. VERIFY EXACT LOCATION WITH AMEREN.
22. PROVIDE NEW GROUNDING AT NEW SERVICE. SEE ONE-LINE DIAGRAM.
23. REFER TO PANEL SCHEDULE FOR FEEDER SIZING.

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HVAC & ELECTRICAL IMPROVEMENTS TO WASHINGTON ST. GYM
MACOMB CUSD 185
MACOMB, IL 61455

DESIGNED SFD	DRAWN APW
CHECKED SFD	FIELD BOOK
CHECK DATE 07/29/2022	

SHEET TITLE
ELECTRICAL PLAN
PROJECT NO.
21-0155
DRAWING ISSUED DATE:
08/01/2022
SHEET
E101